

CLAIMS

1. A fin for a heat exchanger having brazed plates, which fin is produced from thick sheet-metal and has a pattern reproduced in a general direction (D2) in accordance with a geometric pitch (P) such that the ratio of the minimum thickness (e) of the sheet-metal to the geometric pitch (P) is greater than 0.2, characterised in that it is obtained either by a hot-extrusion operation or by a material-removing machining operation.

2. A fin according to claim 1, characterised in that the ratio is lower than 0.8.

3. A fin according to claim 1, characterised in that it defines a principal general direction of corrugation (D1) and comprises corrugations which follow one another in a direction (D2) substantially perpendicular to the principal general direction (D1), the corrugation comprising corrugation flanks (3) connecting corrugation peaks (5) and corrugation troughs (7), the corrugation peaks (5) and the corrugation troughs (7) defining regions for connection by brazing to respective separating plates (8) of the exchanger.

4. A fin according to claim 3, characterised in that at least some of the connection regions (5, 7) have a cross-section the width (L) of which in the transverse direction (D2) is greater than the width (l) defined by the mutually spaced faces of the two corresponding corrugation flanks (3).

5. A fin according to claim 3, characterised in that it has beads (12) in the regions where the corrugation peaks

(5) or the corrugation troughs (7) join the corrugation flanks (3).

6. A fin according to claim 5, characterised in that the beads (12) have an outside radius (R) of substantially from 0.2 to 0.5 mm.

7. A fin according to claim 1, characterised in that the pattern has a cross-section which has substantially the general shape of an H.

8. A fin according to claim 7, characterised in that the peaks and troughs (29) defined by the free ends of the H-shaped cross-section of a pattern define regions for connection by brazing to respective separating plates of the exchanger, and those regions (29) have a thickness ( $e'$ ) greater than the thickness ( $e$ ) of the other regions of the branches (23, 25) of the H.

9. A method for the manufacture of a fin for a heat exchanger having brazed plates, which fin is produced from thick sheet-metal and has a pattern reproduced in a general direction (D2) in accordance with a geometric pitch (P) such that the ratio of the minimum thickness ( $e$ ) of the sheet-metal to the geometric pitch (P) is greater than 0.2, characterised in that it comprises a hot-extrusion operation giving the fin its general shape.

10. A method for the manufacture of a fin for a heat exchanger having brazed plates, which fin is produced from thick sheet-metal and has a pattern reproduced in a general direction (D2) in accordance with a geometric pitch (P) such that the ratio of the minimum thickness ( $e$ ) of the sheet-metal to the geometric pitch (P) is greater than 0.2, char-

acterised in that it comprises an operation of machining a metal sheet by the removal of material, giving the fin its general shape.

11. A plate heat exchanger, characterised in that it comprises, in at least a first passage, a fin (1 ; 11 ; 21) according to claim 1, which fin is connected by brazing to two successive plates (8).

12. A plate heat exchanger according to claim 11, characterised in that it also comprises, in at least a second passage, a fin produced from thin sheet-metal and connected by brazing to two successive plates (8).

13. A plate heat exchanger according to claim 11, characterised in that it operates with at least one fluid under a pressure greater than 100 bar, especially greater than 200 bar, and preferably of the order of 250 bar, which circulates in the first passage.